APPLICATION OF TOTAL PRODUCTIVE MAINTENANCE IN MANUFACTURING ORGANIZATIONS IN SRI LANKA

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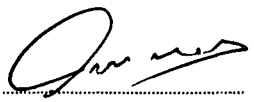
M.B.M. Musadik.

DECLARATION

"I certify that this thesis does not incorporate without acknowledgement any material previously submitted for a degree or diploma in any university to the best of my knowledge and belief it does not contain any material previously published, written or orally communicated by another person except where due reference is made in the text."



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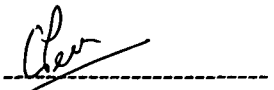

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ABSTRACT

It is understood that the manufacturing organizations in Sri Lanka do not perform effectively in terms of resource utilization in order to compete with the international competition. There are several management shortcomings contributing to this ineffectiveness. The maintenance management is one of the negligence found in industries. In an organization there are several factors, which contribute to the inefficiency of maintenance management. These are management approach, order patterns, organizational culture etc. The maintenance management function is very often taken very lightly by the management in many organizations, and the sole responsibility is passed on to the maintenance department. However in reality this activity cannot be carried out only by the maintenance department without the cooperation of production departments.

Since 1980s the quality initiatives were seen as critical for greater competitiveness. Hence gained much attention in the western world under the influence of Japanese management principles. This has resulted in a wide spread adoption of Japanese quality techniques such as quality circles (QC), team working, just-in-time (JIT), Kanban system, kaizen, total quality management (TQM) and total productive maintenance (TPM) etc.

The Total Productive Maintenance is an innovative approach to maintenance, which has a potential for enhancing effectiveness of production facilities.

The Sri Lankan industrialists do not pay sufficient attempts to apply TPM to improve the performance, although they are heavily focused on other Japanese concepts like 5S, Quality Circles and Kaizen etc. This research concentrate on the management approaches of the industrialists about the application of Japanese management concepts in view of application of TPM and to achieve better outcomes.

It is found by four case studies in Sri Lankan manufacturing industries that the application of 5S, QC and Kaizen are carried out as separate systems apart from the main operating system. Due to this reason it is found to be difficult to maintain these concept unless a big effort is put. In many organizations these techniques are used as a fashion without understanding the inbuilt benefits. Since these concepts are intruders to the main system sustaining is not possible without a big effort. Ultimately the tendency of dropping out is more, as it is a burden than a benefit. On the other hand the management expect the lower level managers to implement and maintain such systems without considering it as an organizational strategy.

After investigating four Sri Lankan organizations which are hoping to apply TPM and with a comparison of successful case of application of TPM in an Indian organization which has obtained the JIPM certificate, the researcher has proposed in this report, a application model to overcome the main difficulties and weaknesses in application of TPM. When putting TPM into practice the management faces various difficulties. The main obstacle is the cultural barrier and in many occasions the management backout because it leads to various complications. This model has addressed this aspect as well. It is also proposed that first the concept has to be well understood and absorb in to the main operating system in order to gain material benefit and comfort of operation.

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